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[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0685; Project Identifier MCAI-2022-00243-R; Amendment 39-22093; AD 2022-13-07]

RIN 2120-AA64

Airworthiness Directives; AutoGyro Certification Limited (Type Certificate Previously Held by RotorSport UK Ltd) Gyroplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all AutoGyro Certification Limited (type certificate previously held by RotorSport UK Ltd) Model Calidus, Cavalon, and MTOsport 2017 gyroplanes. This AD was prompted by reports of rotor blade longitudinal cracking and rotor blade attachment bolt hole fretting corrosion and cracking. This AD requires reducing the life limits for the rotor systems, repetitively inspecting each rotor blade, and depending on the outcome, removing parts from service. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The FAA must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to https://www.regulations.gov. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this final rule, contact Gerry Speich; Poplar Farm, Wentnor, Bishops Castle, South Shropshire, United Kingdom, SY9 5EJ; telephone +44-1588-505060; or at http://www.auto-gyro.co.uk/. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2022-0685; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the United Kingdom (UK) Civil Aviation Authority (CAA) Mandatory Permit Directive (MPD), any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Chirayu Gupta, Aerospace Engineer, Mechanical Systems & Administrative Services Section, New York ACO Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone (516) 228-7300; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

UK CAA, which is the aviation authority for the United Kingdom, has issued UK CAA MPD 2022-002, dated January 24, 2022 (UK CAA MPD 2022-002), to correct an unsafe condition for Autogyro Certification Limited (formerly Rotorsport Uk Limited) Model MT-03, MTOsport, MTOsport 2017, Calidus, and Cavalon gyroplanes. UK CAA advises of rotor blade longitudinal cracking and rotor blade attachment bolt hole fretting corrosion and cracking on gyroplanes with a Rotor System II installed. According to the UK CAA, due to design similarity, this condition may also affect gyroplanes with a Rotor System I installed. This condition, if not addressed, could result in loss of a rotor blade and subsequent loss of control of the gyroplane.

Accordingly, UK CAA MPD 2022-002 requires determining the accumulated flight hours on the rotor system, complying with new life limits for the rotor systems, and repetitively inspecting each rotor blade to hub bar attachment fastenings and blade holes. Depending on the outcome of the inspections, UK CAA MPD 2022-002 requires replacing and returning parts, and reporting certain information to Autogyro Certification Limited and the UK CAA.

FAA's Determination

These gyroplanes have been approved by the aviation authority of the UK and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the UK, the UK CAA, its technical representative, has notified the FAA of the unsafe condition described in its MPD. The FAA is issuing this AD after evaluating all known relevant information and determining that the unsafe condition described previously is likely to exist or develop on other gyroplanes of these same type designs.

Related Service Information

The FAA reviewed RotorSport UK Ltd Service Bulletin SB-144 Issue 1, dated, August 19, 2021. This service information specifies new Rotor System I and II life limits and new rotor blade to hub bar attachment fastenings and blade hole inspection compliance times. This service information also specifies a recurring inspection of the rotor system hub bar assembly bolts.

The FAA also reviewed RotorSport UK Ltd Service Information Letter SIL-028, Issue 1, dated June 17, 2019. This service information provides construction and general information regarding the different versions of Rotor System I and II and the rotor blades, and highlights particular areas of importance of the rotor blades. This service information specifies procedures for inspecting the blade to hub bar joints, rotor blade surfaces and planes, and rotor blade attachment bolt holes. This service information also specifies information regarding and provides photos of trailing edge damage, leading edge damage, and a longitudinal blade root crack that is adjacent to the bolted area. Lastly, this service information provides information regarding if there is substantial damage of a rotor blade or rotor system.

AD Requirements

This AD requires reducing the life limits for Rotor Systems I and II. This AD also requires repetitively removing, cleaning, and inspecting certain areas of each rotor blade and each rotor blade bolt hole, and depending on the outcome, removing parts from service and installing airworthy parts.

Differences between this AD and the UK CAA MPD

UK CAA MPD 2022-002 applies to Model MT-03 and MTOsport gyroplanes, whereas this AD does not because those models are not FAA type-certificated. UK CAA MPD 2022-002 requires accomplishing the initial instance of the inspections within 100 hours or 12 months for Rotor System I, and within 100 or 500 hours depending on accumulated usage or 2 years or 1 year (recommended) depending on operational or storage usage for Rotor System II; whereas this AD requires accomplishing the initial inspections within 10 hours time-in-service (TIS) or 3 months, whichever occurs first, for a gyroplane with a Rotor System I or II, all part numbers and serial numbers, installed. For certain Rotor System II units, UK CAA MPD 2022-002 recommends a shorter recurring inspection time; whereas this AD does not. This AD requires wiping the inspection areas of the rotor blades clean before accomplishing the inspections; whereas UK CAA MPD 2022-002 does not. UK CAA MPD 2022-002 refers to service information that states that "means of inspection can be dye penetrant or visual high magnification or as determined appropriate by the inspector;" whereas this AD mandates what types of inspections must be accomplished. UK CAA MPD 2022-002 requires returning parts to the manufacturer, whereas this AD does not. UK CAA MPD 2022-002 requires reporting certain information; whereas this AD does not.

Justification for Immediate Adoption and Determination of the Effective Date

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C. 551 *et seq.*) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for "good cause," finds that those procedures are "impracticable, unnecessary, or contrary to the public interest." Under this section, an agency, upon finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies foregoing notice and comment prior to adoption of this rule because cracking and fretting on the surfaces of the rotor blades can lead to degradation or structural failure of the rotor system and subsequent loss of control of the gyroplane. Loss of aerodynamic control due to the mentioned unsafe condition could ultimately be categorized as a catastrophic failure. In addition, the FAA has no information regarding the number of rotor blades that are in service beyond their fatigue life or pertaining to the extent of cracking or corrosion of rotor blades that may currently exist in gyroplanes or how quickly the condition may propagate to failure. In light of this, this AD reduces the life limit threshold of the rotor systems and the initial instance of the rotor blade inspections required by this AD must be accomplished within 10 hours TIS or 3 months, whichever occurs first. This compliance time is shorter than the time necessary for the public to comment and for publication of the final rule. Accordingly, notice and opportunity for prior public comment are impracticable and contrary to the public interest pursuant to 5 U.S.C. 553(b)(3)(B).

In addition, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days, for the same reasons the FAA found good cause to forego notice and comment.

Comments Invited

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2022-0685; Project Identifier MCAI-2022-00243-R" at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to https://www.regulations.gov, including any

personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Chirayu Gupta, Aerospace Engineer, Mechanical Systems & Administrative Services Section, New York ACO Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone (516) 228-7300; email 9-avs-nyaco-cos@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Regulatory Flexibility Act

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without prior notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 41 gyroplanes of U.S. Registry. Labor rates are estimated at $85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Replacing a rotor system takes about 1.5 hours and parts cost about $5,500 for an estimated cost of $5,628 per gyroplane and $230,748 for the U.S. fleet, per instance. Inspecting a rotor system takes about 1 work-hour for an estimated cost of $85 per gyroplane and $3,485 for the U.S. fleet, per inspection cycle.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify that this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866, and

(2) Will not affect intrastate aviation in Alaska.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-13-07 AutoGyro Certification Limited (Type Certificate Previously Held by RotorSport UK Ltd): Amendment 39-22093; Docket No. FAA-2022-0685; Project Identifier MCAI-2022-00243-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to AutoGyro Certification Limited (type certificate previously held by RotorSport UK Ltd) Model Calidus, Cavalon, and MTOsport 2017 gyroplanes, certificated in any category.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6210, Main Rotor Blades.

(e) Unsafe Condition

This AD was prompted by reports of rotor blade longitudinal cracking and rotor blade attachment bolt hole fretting corrosion and cracking. The FAA is issuing this AD to prevent a rotor system from remaining in service beyond its fatigue life and detect fretting corrosion and cracking. The unsafe condition, if not addressed, could result in failure or loss of a rotor blade and subsequent loss of control of the gyroplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For a gyroplane with a Rotor System I, all part numbers and serial numbers, installed:

(i) That has accumulated 700 or more total hours time-in-service (TIS) on the rotor system, before further flight after the effective date of this AD, remove the rotor system, which includes the rotor bearing, from service.

(ii) That has accumulated less than 700 total hours TIS on the rotor system, before accumulating 700 total hours TIS after the effective date of this AD, remove the rotor system, which includes the rotor bearing, from service.

(iii) Thereafter following paragraph (g)(1)(i) or (ii) of this AD, remove the rotor system, which includes the rotor bearing, from service before accumulating 700 total hours TIS.

(2) For a gyroplane with a Rotor System II, all part numbers and serial numbers, installed:

(i) That has accumulated 2,500 or more total hours TIS on the rotor system, before further flight after the effective date of this AD, remove the rotor system, which includes the rotor bearing, from service.

(ii) That has accumulated less than 2,500 total hours TIS on the rotor system, before accumulating 2,500 total hours TIS after the effective date of this AD, remove the rotor system, which includes the rotor bearing, from service.

(iii) Thereafter following paragraph (g)(2)(i) or (ii) of this AD, remove the rotor system, which includes the rotor bearing, from service before accumulating 2,500 total hours TIS.

(3) For a gyroplane with a Rotor System I or II, all part numbers and serial numbers, installed, accomplish the actions required by paragraph (g)(4) of this AD within 10 hours TIS or 3 months after the effective date of this AD, whichever occurs first.

(4) For each rotor blade, starting with the rotor blade bolt closest to the rotor hub, sequentially remove each bolt and lock nut, remove the rotor blade, and remove the inner end cap.

(i) Using a dry cloth, wipe clean the rotor blade upper and lower surfaces within 100 mm of the circumference of each bolt hole.

(A) Dye penetrant inspect, or use a flashlight and 10X or higher power magnifying glass, to inspect the cleaned rotor blade upper and lower surfaces within 100 mm of the circumference of each bolt hole for a crack, split, dent, and fretting corrosion. If there is a crack, split, dent, or fretting corrosion at any point within 100 mm

over the full circumference (360°) of a bolt hole, before further flight, remove the rotor system, which includes the rotor bearing, from service and install airworthy parts.

(B) Using a flashlight and 10X or higher power magnifying glass, inspect each plane on the cleaned upper and lower surfaces for bending within 100 mm of the circumference of the bolt hole. If there is any bending in any plane within 100 mm over the full circumference (360°) of a bolt hole, before further flight, remove the rotor system, which includes the rotor bearing, from service and install airworthy parts.

(ii) Dye penetrant inspect, or use a flashlight and 10X or higher power magnifying glass to inspect the rotor blade upper and lower inside surfaces at the rotor blade extrusion end (where the inner end cap was removed) for a crack, paying particular attention for a longitudinal crack adjacent to the bolted area. If there is a crack, before further flight, remove the rotor system, which includes the rotor bearing, from service and install airworthy parts.

Note 1 to paragraph (g)(4)(ii): Page 5 of RotorSport UK Ltd Service Information Letter SIL-028, Issue 1, dated June 17, 2019, includes a photo of a longitudinal blade root crack.

(iii) Using a flashlight and 10X or higher power magnifying glass, inspect each bolt hole in the rotor blade upper and lower surfaces for any burrs and fretting corrosion. If there is a burr or fretting corrosion, before further flight, remove the rotor system, which includes the rotor bearing, from service and install airworthy parts.

(iv) Using a dry cloth, wipe clean and dye penetrant inspect, or use a flashlight and 10X or higher power magnifying glass to inspect each bolt hole in the rotor blade upper and lower surfaces for a crack. If there is a crack, before further flight, remove the rotor system, which includes the rotor bearing, from service and install airworthy parts.

(5) Thereafter following paragraph (g)(3) of this AD, repeat the actions required by paragraph (g)(4) of this AD at intervals not to exceed the compliance time specified in paragraphs (g)(5)(i) through (iii) of this AD, as applicable to your rotor system.

(i) For a gyroplane with a Rotor System I, all part numbers and serial numbers, installed, at intervals not to exceed 100 hours TIS or 12 months, whichever occurs first.

(ii) For a gyroplane with a Rotor System II, all part numbers and serial numbers, installed, that has accumulated more than 1,500 total hours TIS on the rotor system, at intervals not to exceed 100 hours TIS or 24 months, whichever occurs first.

(iii) For a gyroplane with a Rotor System II, all part numbers and serial numbers, installed, that has accumulated 1,500 or less total hours TIS on the rotor system, at intervals not to exceed 500 hours TIS or 24 months, whichever occurs first.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (i)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

(1) For more information about this AD, contact Chirayu Gupta, Aerospace Engineer, Mechanical Systems & Administrative Services Section, New York ACO Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone (516) 228-7300; email 9-avs-nyaco-cos@faa.gov.

(2) RotorSport UK Ltd Service Information Letter SIL-028, Issue 1, dated June 17, 2019, which is not incorporated by reference, contains additional information about the subject of this AD. For service information identified in this AD, contact Gerry Speich; Poplar Farm, Wentnor, Bishops Castle, South Shropshire, United Kingdom, SY9 5EJ; telephone +44-1588-505060; or at http://www.auto-gyro.co.uk/. You may view this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(3) The subject of this AD is addressed in United Kingdom (UK) Civil Aviation Authority (CAA) Mandatory Permit Directive (MPD) 2022-002, dated January 24, 2022. You may view the UK CAA MPD at https://www.regulations.gov in Docket No. FAA-2022-0685.

(j) Material Incorporated by Reference

None.

Issued on June 13, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-13362 Filed: 6/16/2022 4:15 pm; Publication Date: 6/22/2022]